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ABSTRACT

To document the effects of television public service announcements (PSAs) in a community setting, a public service campaign was designed and implemented to stimulate awareness of and behavioral response to problems of hypertension among urban Mexican Americans in Houston. Three pretested Spanish language PSAs were designed to motivate the audience to call for additional information about the control of hypertension. The PSAs were aired 224 times over 6 weeks on all local television stations during daytime and prime time viewing periods. A three-phase evaluation of the effectiveness of the PSAs consisted of telephone surveys of adults in randomly selected Mexican American households. Over one-third of the 499 surveyed adults reported awareness of the PSAs. Also, a significantly greater percentage of the group exposed to the PSAs reported subsequently dicussing their blood pressure with their physician, family, or friends; 16.5% reported having a blood presure checkup. The 101 viewers who called for more information were more likely to have less education, have lower incomes, and be female. Results indicated that a Spanish language PSA campaign can reach a large segment of the Mexican American population and can motivate them to take action. (SB)

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Television Public Service Announcements: Are They An Effective Channel For Communicating Health Information to Urban Mexican Americans?

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Abstract

Data from a six-week hypertension television public service announcement (PSA) campaign aimed at urban Mexican Americans were analyzed to determine the effectiveness of television PSAs in reaching the Mexican American community. Over one-third (36.9%) of the adults from randomly selected Mexican American households sampled (N=499) reported awareness of one or more of the campaign PSAs on television. Differences between respondents not exposed to one or more of the PSAs, exposed but did not call, and respondents who called for the brochure are compared. By means of a health knowledge index, respondents were divided into well-informed, poorly informed, and partially informed groups. The well-informed were more likely to have seen one of the television public service announcements than the poorly informed. Data from the study indicate that PSAs are effective in reaching a large portion of the Mexican American community. However, PSAs alone are not an effective medium in reaching the poorly informed Mexican American.

Increasing amounts of resources are being allocated by federal, state, and local health organizations to provide health information and services to the Mexican American community, now recognized as the second largest and fastest growing minority group in the United States.[1,2] However, only recently, such as at the Conference on Communicating with Mexican Americans: Por Su Buena Salud, sponsored by Baylor College of Medicine, the National High Blood Pressure Education Program, and the National Heart, Lung, and Blood Institute, National Institutes of Health, has the problem of how to reach the Mexican American community with health information begun to receive the attention of health educators and media experts.[3] Because health communicators have a variety of media available from which to choose (i.e television, radio, newspapers, billboards), there is a need to document the impact of these media on the Mexican American community.

One medium which needs to be evaluated is television public service messages or PSAs. Television stations devote some of their air time to announcements which promote programs, activites or services of nonprofit organizations because public affairs is one of the program criteria for license renewal.[4] These PSAs are beneficial for nonprofit health institutions because they can reach large audiences at one time and are broadcast free of charge.

Several studies show that television PSAs are an important source of health information for large segments of the population.[5,6,7,8] Two nationwide surveys conducted by Pacific Mutual Life Insurance Company in 1978 and by General Mills, Inc. in 1979 revealed that over two-thirds of the respondents reported receiving a great deal or some health information from public service announcements (PSAs) on television or radio, second only to health information received from a physician.[6,7] Freimuth and Marron (1979), in a survey of 659 respondents from three cities (Stratford, Connecticut; Minneapolis,

Minnesota; and San Diego, California) described the public's use of three health information sources.[8] They reported that 51% of the respondents received health information from television PSAs, 71% received information from medical personnel, and 49% stated they received health information from family or friends.

Unfortunately, little data are available to document how Mexican Americans receive their health information and whether mass media channels are an effective means to reach Mexican Americans, especially specific segments of this community.[9] To document the effects of television public service announcements in a community setting, a public service campaign was designed and implemented to stimulate increased awareness of, and behavioral response to, the problem of high blood pressure on the part of a highly defined segment of an urban community. The results of that campaign are presented here.

METHODOLOGY

Mexican American households in the Houston metropolitan area (N=69,000) were the target population for a hypertension awareness program (conducted in 1977) designed to determine the effectiveness of television PSAs in reaching this segment of the population.[10] Data collected in an earlier community health survey conducted in this geographic area[11] revealed that the Mexican American community was significantly less knowledgeable about the impact, control, and possible prevention of cardiovascular diseases, specifically high blood pressure, than the Anglo population with which it is generally combined in health research data. In addition, these survey results indicated that, second only to the physician, Mexican Americans relied on television as their primary source of health information.

Three 30-second television public service announcements were designed, pretested, and produced in Spanish for the campaign. Culturally relevant messages, appeals, and the overall theme for the series were determined on

the basis of input from two focus groups conducted with representatives of the targeted Mexican American population. Separate sessions were conducted with local television public service directors to gain their input and cooperation for the program.

Incorporating information and ideas gleaned in both the mass media and Mexican American focus groups*, PSAs were designed to maximize audience identification with, and involvement in, the messages which employed culturally relevant scenarios dramatized by Mexican American actors. Announcements were motivational, versus informational in nature, and designed to stimulate the audience to take a specific risk-reducing action: in this case, to call for additional information concerning the control of high blood pressure. A bilingual (Spanish and English) brochure was developed to supply this information. The brochure described the dangers of high blood pressure; outlined the necessary steps for detecting and controlling this disease; and provided a list of locations where a free blood pressure checkup could be obtained. This brochure incorporated the ideas of the Mexican American focus groups, as well as those of various health and education professionals.

All PSAs were produced in Spanish, and emphasized the importance of personal, positive action to combat high blood pressure. Announcement #1 dramatized a late-night scene in which a silent killer, high blood pressure, lurked. Focusing on the simplicity of detecting this disease, Announcement #2 portrayed a Mexican American woman who obtained a blood pressure checkup

* A focus group is an informal session in which several participants are asked to discuss in their own words all aspects of a specified topic or subject matter. The discussion is monitored by one or more professionals and the entire session is taped for later review. Such groups are designed to obtain an in-depth understanding of a defined population's frame of reference with respect to a given topic. Analysis of the terminology, expressions and other verbal communications that surface in the group yields useful guidelines for program and message design.

at a neighborhood clinic. Finally, Announcement #3 centered around the action of a softball game in which a youthful Mexican Ameican batter was portrayed as the unknowing victim of hypertension. All announcements closed with a telephone number and an appeal to the audience to call for additional information about high blood pressure.

Through the cooperation of the TV public service directors, the PSAs were aired a total of 224 times over a six-week period on all local television stations, including three network-affiliated VHF and two independent UHF channels, one of which devoted evenings exclusively to Spanish programming. The three announcements were rotated systematically, each receiving approximately one-third of the allotted air time on each channel. The majority of the announcements were scheduled during highly desirable daytime and prime time viewing periods. No other high blood pressure information was disseminated via television in the Houston metropolitan area during the campaign time frame. A telephone line was installed and maintained throughout the campaign to provide for target population feedback. Those respondents who called for more information were mailed the bilingual brochure describing high blood pressure and outlining behavioral steps for its control.

A three-phase evaluation was designed to assess the impact of the television PSAs on the target population. Each phase consisted of a telephone survey developed in accordance with specific evaluation objectives and pretested in Spanish and English with representatives of the target group. Professional bilingual interviewers were employed and trained to conduct all interviews. PSAs market penetration and effects, in terms of target population awareness of the high blood pressure PSAs and reported behavioral response, were assessed through a separate sample pretest-posttest procedure implemented immediately before (Phase I) and after (Phase III) the campaign. Telephone response

(Phase II) to the announcements was monitored weekly to assess the PSA's effectiveness in stimulating this specific investigative action.

Immediately prior to campaign initiation, the Phase I pretest measurement was conducted to provide baseline data against which the effects of the television public service campaign could be gauged. Specifically, this phase consisted of a random telephone survey of adults, 17 years-of-age or older, in 500 Houston area Mexican American households to assess target population, awareness of the problem of high blood pressure, sources of this awareness, and relevant health behaviors. Objectives for this evaluation included a determination of target population awareness of specific health problems or diseases, commercial or public service advertising concerning health problems or diseases, the three hypertension campaign PSAs and resulting action, specific media channels of campaign awareness, knowledge and behaviors related to blood pressure, and respondent demographic characteristics. An identical post-measure, Phase III, was conducted among a separate random sample of 499 Mexican American telephone households immediately following the campaign. Comparisons of these two measures provided data concerning the market penetration of the television PSAs and their effects on population behavior related to high blood pressure.

The sample for the pre- and post- campaign surveys was selected from a data base of 503 previously identified Mexican American households. The data base of pre-indentified Mexican Americans was selected from random digit dialing telephone interviews conducted in this area by a marketing firm for a two year period prior to this study. The addresses of each household were used as starting addresses for concurrently drawing the pre- and post-campaign samples. A maximum of two interviews, one male and one female from different households, was completed from sample clusters composed of ten non-business telephone households listed below each (pre-campaign) or above (post-campaign) starting

address as printed in a Houston crisscross directory. For each telephone number selected, four attempts were made to contact a Mexican American household before a replacement number in the sample cluster was selected. Initially, concern existed that a high percentage of Mexican Americans might not have a telephone. This was not confirmed by a study conducted by a local research firm and the local telephone company which noted that 86% of the Mexican American households in this urban area do have a telephone, a finding which is lower (but not alarmingly so) than the percentage of Black (91%) or Anglo (96%) households with a telephone in this area.[12]

A similiar but separate questionnaire was designed and pretested for the Phase II telephone respondents to determine the same information as in Phase I and Phase III, along with their reasons for calling for additional high blood pressure information. In addition, of the 114 telephone respondents in Phase II who called in, 101 were recontacted within one week to administer the telephone respondent questionnaire.

RESULTS

Comparison of Phase I and Phase III (pre- and post-campaign) survey data (Table 1) revealed that over one-third of the target population survey reported awareness of one or more of the campaign PSAs. As Table 1 shows, 8.8 percent of the pre-campaign survey population reported awareness of one or more of the three PSAs in the study. Following the television campaign, 45.7 percent of the respondents reported message awareness, for a net increase in total message awareness of 36.9 percent. Responses to these questions in both the pre- and post-campaign surveys illustrate the importance of a pre-measure in any field demonstration project designed to determine the effects of a mass media intervention Fallacious responses, whether a result of imperfect recall or desire to please the interviewer, are a constant bias that must be taken into consideration

when interpreting results. Given the comparability that random selection of pre- and post-measure populations insures, a pre-measure of the magnitude of such responses provides a constant by which the post-measure results can be adjusted to more accurately reflect intervention effects.

The effects of message exposure were analyzed both in terms of reported awareness of the problem of high blood pressure and corrective action in response to the problem. Data concerning campaign effects are presented in Table 3. Primary awareness refers to the percentage of all respondents who cited high blood pressure as their first response to an open-ended question: "When you think about health, what health problems or diseases come to mind first?" Total awareness reflects the percentage of all respondents who mentioned high blood pressure in any position when asked this and the subsequent question: "What other health problems or diseases can you name for me? Any others?" Behavioral measures focused on indicators of respondent evaluation of the high blood pressure problem and trial of the advocated behavior (i.e. obtaining a blood pressure checkup) as a prelude to possible adoption of regular blood pressure checkups. Table 3 reflects the percentage of respondents who, after exposure to the television messages, reported discussing high blood pressure with their physician, a family member or friend; and/or visiting a health clinic or physician for a blood pressure checkup.

Chi square comparisons of campaign effects along these dimensions revealed no significant differences between the unexposed pretest population (N=500) and the unexposed posttest group (N=271). Neither were significant differences in awareness found between the unexposed (N=271) and exposed (N=228) posttest groups, as measured by the survey.

Turning to reported behavioral response to the campaign messages, as reported in Table 3, chi square analyses revealed that a significantly greater percentage

of the exposed group, versus the unexposed group ($p < .001$) in the posttest, reported discussing high blood pressure with their physician, a family member or friend after seeing the campaign PSAs. In terms of more direct health-related behavior, 16.5 percent of the exposed group, versus only 5.4 percent of the unexposed group ($p < .001$), reported visiting a health clinic or physician for a blood pressure checkup after the campaign intervention. A similar analysis was performed using the pretest unexposed sample versus the posttest exposed group. The results were significant ($p < .001$) in the same response area as those presented in Table 3.

Phase II telephone response during this six-week campaign served as another measure of message effects in the target population. A total of 114 calls for additional information concerning high blood pressure control were received during the campaign. This represents a response rate of .17 percent of the estimated target population households (N=69,000).[10]

The campaign was further evaluated by comparing the demographic characteristics of the 271 respondents not exposed to any of the PSAs and the 228 respondents who saw one or more PSA of Phase III to the 101 community members who called for the brochure.

Unsurprisingly, comparison of respondents who were not exposed with those who were exposed showed that Spanish-interviewed respondents were more likely to have seen PSAs than English-interviewed respondents. There were no other significant demographic differences between the exposed and the not exposed.

On comparing the 101 call-ins to the 228 respondents who were exposed but did not call, we observed that those who called were more likely to have lived in Houston five years or less. Also, those who called were more likely to have had less education and lower incomes than those exposed but who did not call ($p < .001$). The call-ins were also more likely to be female ($p < .001$).

When we compare the past behavioral actions between the not exposed and exposed, we see some interesting differences. The not exposed were just as likely to have had their blood pressure taken, but were less likely to have had it checked in the previous six months. Comparison of the exposed to the telephone respondents showed no significant differences in ever having a blood pressure check or in recency of the test.

The three groups were also compared according to their knowledge of high blood pressure. Based on answers to what is high blood pressure and what diseases does it lead to, repondents were assigned an index of hypertension knowledge to distinguish the poorly-informed Mexican American from the well-informed Mexican American. Based on this measure of hypertension knowledge, survey respondents who answered neither question correctly were designated as poorly informed, those who answered one question correctly were designated as partially informed, and those who answered both questions correctly were designated as well informed. Because this is only a rough indicator of the respondents' hypertension knowledge, caution should be exercised in interpreting these findings until more extensive studies are conducted. However, it is interesting to note that the exposed group was more likely to be more informed about high blood pressure than the not exposed group. Also, the call-ins were more informed about high blood pressure than the exposed respondents.

So, what are some of the major implications of this study? First, based on the separate pre- and post-campaign surveys, 36.9% of the Mexican American households were reached with one or more of the messages. Because this campaign resulted in 224 showings of the spots, contentrated in a short period, it seems to suggest that a PSA campaign can reach a large segment of the Mexican American population, but will not reach the entire population. In order to reach the entire Mexican American population, other channels in conjunction with a PSA

campaign will be needed.

Second, significant increases in behavioral response measures did occur between the pre-campaign and post-campaign populations, suggesting that PSAs can motivate Mexican Americans to take action.

Third, use of Spanish language in PSAs is a good attention-getter, and seems to motivate and appeal more to the Spanish-interviewed Mexican Americans than those interviewed in English. This might suggest that bilingual PSAs or a campaign with both English and Spanish PSAs might be more effective in reaching larger segments of the Mexican American population.

Fourth, the PSAs are more likely to reach the well-informed versus the poorly-informed Mexican American, and those who responded are even better informed than those who were exposed but did not call. This seems to suggest that PSAs are less likely to reach and motivate the less informed segments of the population.

Fifth, in the campaign, the respondents who called for the brochure were less educated and had less family income than those who were exposed, suggesting that PSAs can reach lower socioeconomic segments of the Mexican American population.

And, finally, those who called in tended to be females, suggesting that the woman may have the responsibility to take care of health matters in the Mexican American culture and that PSAs targeted at women might therefore be more effective.

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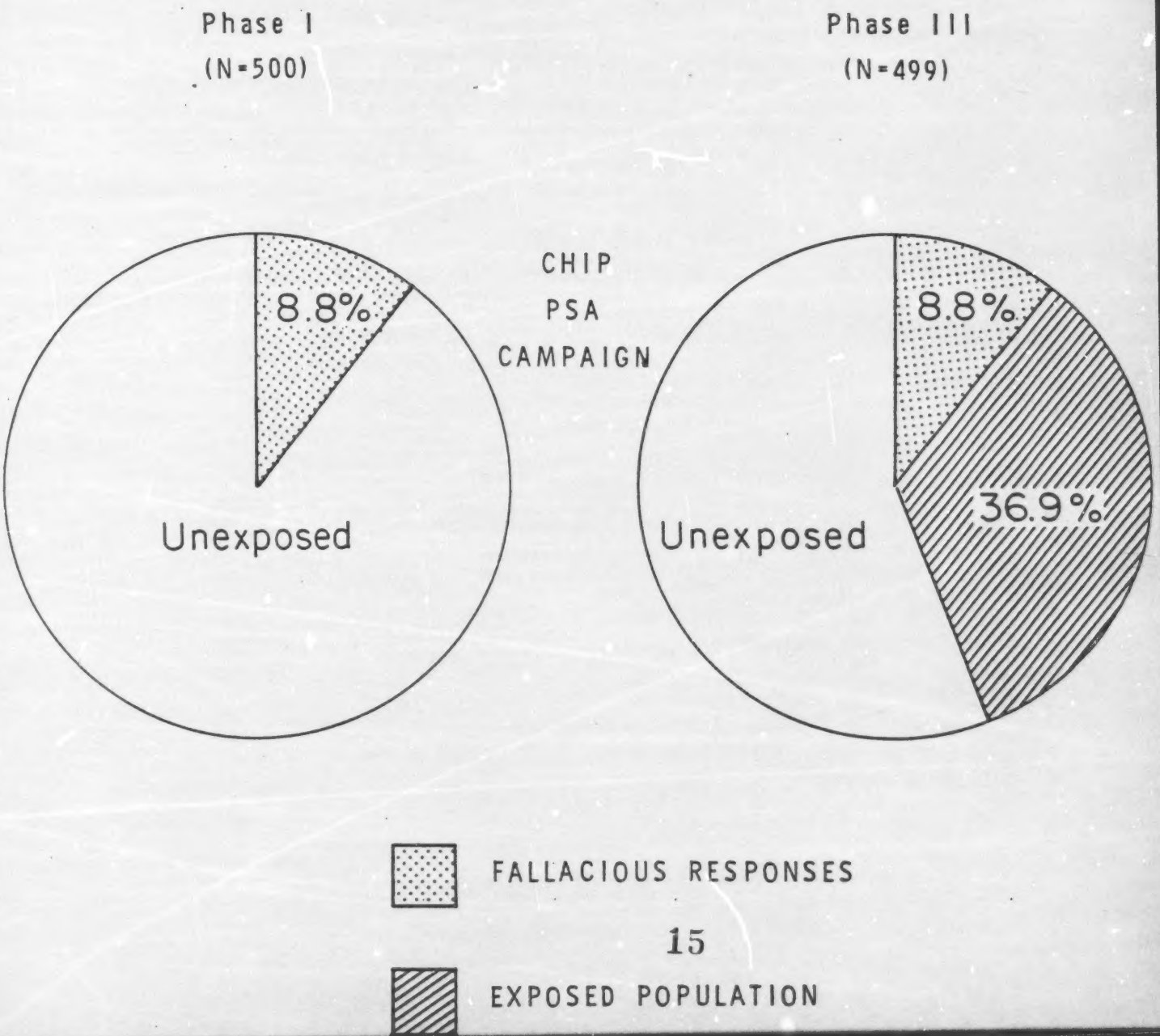
REPORT RESULTS

Reported Awareness (Exposure) of One or More Television PSAs



DEMOGRAPHIC CHARACTERISTICS
CHIP, 1977

VARIABLES	Not Exposed		Exposed - No Call		Call-Ins	
	n	%	n	%	n	%
Interview Language						
Spanish	43	15.9	113	49.6	59	58.4
English	209	77.1	103	45.2	41	40.6
Missing	19	7.0	12	5.3	1	1.0
	X^2 = 65.79, p < .001				X^2 = 4.62, p = .097	
Years in Houston						
< 1 year	8	3.0	8	3.5	11	10.9
2 to 5	48	17.7	48	21.1	27	26.7
6 to 10	167	61.6	125	54.8	41	40.6
Unknown	---	----	3	1.3	1	1.0
	X^2 = 1.97, p = .583				X^2 = 10.47, p = .015	
Age						
Under 25	40	14.8	33	14.5	8	7.9
25 to 34	115	42.4	87	38.2	31	30.7
35 to 44	58	21.4	50	21.9	24	23.8
45 to 54	32	11.8	26	11.4	18	17.8
55 to 64	21	7.8	17	7.5	14	13.8
65 +	5	1.8	15	6.5	5	5.0
Unknown	---	----	--	----	1	1.0
	X^2 = 7.54, p = .182				X^2 = 9.14, p = .102	
Education						
< 8	67	24.7	71	31.1	55	54.4
9 - 11	63	23.3	39	17.1	18	17.8
12	84	31.0	74	32.5	15	14.9
13 - 15	49	18.0	41	18.0	8	7.9
16 +	4	1.5	2	.9	4	4.0
Unknown	4	1.5	1	.4	1	1.0
	X^2 = 4.56, p = .335				X^2 = 26.4, p = .001	
Income						
Under $5,000	16	5.9	9	3.9	18	17.8
$5,000-$9,999	45	16.6	50	21.9	48	47.5
$10,000-$14,999	93	34.3	75	32.9	23	22.8
$15,000-$19,999	62	22.9	56	24.7	8	7.9
Over $20,000	31	11.4	29	12.7	2	2.0
Unknown	24	8.9	9	3.9	2	2.0
	X^2 = 2.85, p = .586				X^2 = 52.32, p < .001	
Sex						
Male	132	48.7	124	54.4	34	33.7
Female	139	51.3	104	45.6	67	66.3
	X2 = 1.60, p = .203				X2 = 12.04, p < .001	

Comparison of Not Exposed, Exposed-No Call, and Telephone Respondents by Behavioral Actions and Knowledge of Blood Pressure

	Not Exposed (N=271)		Exposed (N=228)		Respondents (N=101)	
	n	%	n	%	n	%
Blood Pressure Ever Taken						
Yes	256	94.5	222	97.4	98	97.0
No	11	4.0	6	2.6	3	3.0
Unknown	4	1.5	-	-	-	-
		$x^2 = .82$ $p = .632$		$x^2 = .03$ $p = .857$		
How Long Ago Blood Pressure Taken						
< 6 months	153	56.5	171	75.0	66	65.3
6 month - 1 year	50	18.5	20	8.8	18	17.8
1 yr.- 2 yrs.	36	13.2	10	8.8	7	6.9
Over 2 yrs.	16	5.9	11	4.8	7	6.9
Unknown	16	5.9	6	2.6	-	-
		$x^2 = 17.15$ $p < .001$		$x^2 = 6.73$ $p = .079$		
Knowledge of H.B.P.						
Poorly Informed	91	33.6	43	18.9	0	0.0
Partially Informed	107	39.5	121	53.1	37	36.6
Well informed	73	26.9	64	28.0	64	63.4
		$x^2 = 15.05$ $p < .001$		$x^2 = 45.40$ $p < .001$		